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ABSTRACT

The teacher parent guide to systematic instruction for retarded chidlren in the Illinois program explains program content, curriculum decisions, lesson plan descriptions, and behavioral analysis and management. The Illinois educational method is characterized by: total push program with coordinated instructional effort, specific curricular procedures, task analysis, behavior modification, economic and systematic language, errorless learning. Areas of program content include: systematic language instruction; self care skills such as dressing, dining, toileting, and grooming; and motor development skills. Guidelines to curriculum decisions suggest observation of child's daily activities, keeping a written record of child' behavior, studying the curriculum by means of task analysis, and stating educational objectives in terms of what the child must do. Each major curricular area is explained to consist of an introductory section and a series of model lesson plans that detail the instructional procedures. The teacher's verbal and physical behavior are broken down into specific steps. The lesson plans indicate when the teacher needs to give the child reinforcement, cues, prompts, assistance, and correction. Behavioral analysis is then defined as a technology for management and instruction of children; basic principles and procedures are clarified. (CB)

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SYSTEMATIC INSTRUCTION FOR RETARDED CHILDREN: THE ILLINOIS PROGRAM

Experimental Edition

PART I

TEACHER-PARENT GUIDE

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Preface

The Illinois Program represents an attempt to integrate knowledge from special education, psychology, speech, and motor performance into a single curriculum for retarded children.

This interdisciplinary project was first conceptualized by Samuel A. Kirk, who saw the need for and initiated interest in developing an integrated multidisciplinary instructional program for retarded children.

The project was supported by the United States Office of Education, the Illinois Department of Mental Health, and the University of Illinois. This interdisciplinary effort involved the Herman Adler Zone Center, Champaign, Illinois, and the following units from the University of Illinois: the Institute for Research on Exceptional Children, the Children's Research Center, and the Departments of Recreation and Park Administration, Speech, and Psychology.

It is important to note that any interdisciplinary project involves a variety of philosophies, theoretical assumptions, and practical approaches. When individuals from several disciplines collaborate in producing an integrated instructional program, differences of opinion usually occur. The value of such research is that it requires individuals to compromise, so that the most effective strategies and tactics may be included.

The Illinois Program required many such compromises over a period of three years. Probably every individual who has been associated with the project will find in the curriculum some ideas or procedures he agrees with and some others with which he would take issue.

The Illinois Program should be viewed as an <u>experimental edition</u>, which is intended to help bridge the gap between "research" and "practical application" in the special education of retarded children. Members of the staff welcome any comments, questions or recommendations which might strengthen the curriculum. It is our hope that the Illinois Program will serve to stimulate new and more effective methods for teaching retarded children.

James C. Chalfant
Project Director

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Project Coordinator

August, 1970

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We would like to acknowledge James W. Tawney and Lee Wright Hipsher for their assistance in preparing this guide for parents, teachers, and child care staff. We are particularly grateful to Mrs. Hipsher for her collaboration in the writing of Chapter Five, "Behavioral Analysis and Management." Also, we would like to thank Robert Siegler and Catherine Moller for their critical comments and suggestions.

James C. Chalfant

Ronald G. Silikovitz

August, 1970

To the children --

from whom we learned so much . . .

Brian	Kathy
Gail	Lisa
Jeff	Marty
Jill	Robyn
Jody	Sonja
Joe	Timmy

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CHAPTER ONE

INTRODUCTION

Instructing retarded children has long posed a problem for parents and teachers. Even the "simple" skills which most children acquire early in life often prove difficult for those variously labeled "trainable," "subtrainable," "severely retarded," or "developmentally retarded." Such children generally earn intelligence quotient scores of fifty and below. They often fail to understand what is said to them and say at most only a few words. In many cases they need assistance in eating, dressing and undressing themselves, and they are not completely toilet trained. Many retarded children at this level have difficulty in tasks requiring gross and fine motor coordination. Such children are generally placed in (a) public school programs for "trainable retarded children," (b) private day school programs for "subtrainable" retarded children, (c) special classrooms in state institutions, or (d) they live at home and do not receive formal classroom instruction. For purposes of simplicity, we will refer to this "target population" as "retarded children."

Although previous research has resulted in the development of many methods and curricula for the instruction of retarded children, few of these curricula specify exact procedures for the teacher to use. Thus, individual experience remains the only guide for many who work intimately with retarded children. Indeed, a review of current educational practice in a variety of settings in Illinois and throughout the nation indicates that the great majority of teachers, aides, and parents of retarded children still lack systematic information concerning what academic and self-help skills these children can learn and specifically how they may be successfully taught.

The Illinois Program represents an effort to deal with this problem. It is a systematic, integrated approach for the instruction of retarded children. It is based on the notion that retarded children are capable of learning many skills and concepts, when given proper instructional conditions. Some of these basic critical conditions include (a) <u>systematic instruction</u> based on careful analysis of the learning task, (b) <u>errorless learning</u> based on the teacher's systematic reinforcement of the child's approximations to terminal behavior, in accordance with the principles of behavioral analysis, (c) an <u>emphasis on the positive</u> aspects of the learning situation, so that the child learns that task-relevant behavior pays off and teacher and child find the learning process to be mutually reinforcing, and (d) <u>criterion teaching</u>, making it possible for the teacher to have explicit information at all times concerning the extent to which the child has mastered each of the component steps in learning a given concept or skill.

The specific areas of instruction include: (a) a program for systematic language instruction; (b) a program for teaching self-help skills such as dressing, dining, toileting, and grooming, and (c) a program for teaching many of the basic motor performance skills which are necessary in recreational activities. This guide provides an overview of the curriculum.

Each major area of the curriculum contains introductory information concerning relevant instructional procedures and a set of model lesson plans detailing these procedures. What the teacher says and does in teaching the child is programmed in detail. As the teacher becomes proficient in systematic instructional techniques, she will learn when and how to deviate from these specific procedures.

The curriculum and teaching procedures have been developed for a variety of "teachers" and settings. The Systematic Language Instruction curriculum is intended primarily for teachers and their aides. It has been tested in public and private day school programs. The Self-Help curriculum should be useful to parents, teachers, child care staff and others who have a responsibility for teaching these skills to children. The Motor Performance curriculum may be useful to teachers, recreation personnel and parents.

The authors consider the Illinois Program to represent a precise system for the instruction of retarded children. An attempt has been made to present the material in a technically correct but also understandable way. To a certain extent, the language and procedures are complicated. This is due to the fact that, in developing the lesson plans and narrative material, the staff tried to take into account the many variables which affect the learning of given behaviors. Moreover, many of the ideas and principles upon which the curriculum is based are not in common usage. Thus, some of the narrative may include technical terms which may be new to the reader.

Every effort has been made to use language and present procedures which can be understood and used effectively by teachers, child care workers, parents, and others who teach retarded children. It is our hope that the reader will carefully study the curriculum in order to understand the procedures and implement them appropriately.

Procedure

The three year period in which the curriculum was produced was divided into a developmental phase and a field testing phase.

The Developmental Phase (September, 1967 - August, 1969)

Ten Down's Syndrome children were selected for participation in the developmental phase of the program. Their ages ranged from four

to seven; all lived in central Illinois. They resided for a period of one year in the Herman Adler Zone Center, an Illinois Department of Mental Health facility. Their progress was compared to that of ten children who also lived in the 18-county area served by the Zone Center. These children formed a contrast group. By August, 1969, a pilot curriculum was developed. The content areas included (a) Systematic Language Instruction, (b) Self-Help Instruction, and (c) Motor Performance and Recreation Instruction.

The Field Testing Phase (September, 1969 - August, 1970)

The Systematic Language Instruction (SLI) curriculum was selected for field testing and evaluation because the basic skills it teaches are prerequisites for work in the self-help and recreation areas. SLI, as is implicit in its title, emphasizes language instruction rather than play and social adjustment. This reflects an optimistic attitude towards the capabilities of severely retarded children. Only field testing could support or negate this optimism.

The evaluation phase was concerned with three major questions:

1) Can teachers not previously exposed to SLI use it effectively? If so, under what conditions?
2) Can children make demonstrable progress under this program?
3) What modifications are indicated in the curricular material?

During the 1969-1970 academic year, thirteen classes for "sub-trainable" and "trainable" retarded children were involved in the evaluation of the Systematic Language Instruction Curriculum. Four classes in Illinois tested the curriculum. Project personnel demonstrated specific teaching procedures and supervised the teachers on a twice-a-week basis. As the teachers demonstrated proficiency in implementing the curriculum and met certain predetermined criteria, the frequency of supervision was gradually reduced, first to one session a week and eventually to an on-call basis.

Four classes located in Kentucky also tested the curriculum. Teachers in these classes learned the specific techniques from a manual accompanying the curriculum. Project personnel were available for consultation and scheduled periodic classroom observations approximately twice a month.

One class was located in a private residential learning center for handicapped children in Missouri. Project personnel had conducted a workshop at this learning center, demonstrating SLI techniques in the spring of 1969. During the 1969-1970 academic year, project personnel monitored the instruction in this class through weekly letters and/or telephone calls to and from the teacher and periodic videotapes of language sessions.

Four additional classes, located in Illinois, were included in the evaluation. Teachers of these classes did not use the SLI curriculum. Instead, the classes served as a contrast group to determine what educational gains children make under present systems of instruction. Project personnel made classroom observations in each of these classes twice a month.

Upon completion of the field testing program, a number of changes were made throughout the SLI curriculum. Those teachers who participated in field testing the experimental language program were interviewed in detail concerning (a) their perceptions of and reactions to the field testing experience, (b) their critical assessment of the strengths and weaknesses of the various components of the curriculum, (c) their training in its implementation, and (d) their specific suggestions for program revision and future training activities. The teachers made a number of valuable suggestions, many of which have subsequently been incorporated into the curriculum.

Unique Characteristics of the Illinois Program

The Illinois Program has several unique characteristics. First, it represents an attempt to develop a <u>total push program</u> in which the daily efforts of all individuals who come into contact with the child are coordinated. The child's instructional curricula in language, self-help skills, and motor performance may be closely integrated, so that the child is working on a limited number of instructional objectives and the individuals who are working with the child complement rather than compete with each other.

Thus, when teaching a skill, the teacher will have confidence that this same skill is being reinforced by other teachers, child care staff, and the child's parents. Also, the repeated exposure to the same teaching procedures and content in different settings helps the child learn and maintain the skills which are being taught. Finally, the likelihood that the child will become confused from exposure to varying teaching techniques is lessened.

It should be noted that integration and communication require great effort on the part of the staff. However, once the initial mechanism for coordination has been developed, relatively little time should be involved in subsequent coordination activities.

Second, the curriculum specifies the sequence of objectives to be taught and what the teacher is to say and do in instructing the child. It also details a reinforcement procedure and a set of correction procedures. Positive reinforcement of appropriate behavior is stressed. It should be noted that the lesson plans are intended to represent <u>specific procedures</u> to teach specific behaviors.

Third, in order to facilitate the child's learning, an attempt has been made to present a systematic program of instruction proceeding from simple tasks to more complex ones. The program employs the concept of task analysis, which involves selecting specific tasks and breaking them down sequentially into component parts (sub-skills). (For an example of task analysis, see pages 16-17.) The teacher assesses the child's behavior to determine which sub-skills he performs, and she begins instruction at the simplest sub-skill with which the child has difficulty. Task analysis is helpful in both assessing and teaching language, self-help, and motor performance skills.

Fourth, the Illinois Program emphasizes behavior modification techniques. All staff pay careful attention to the child's behaviors and frequently reinforce his appropriate responses. For example, when a child ties his shoe without assistance, the teacher reinforces him enthusiastically with a smile, a hug, and a comment like "Good, Steve. You tied your shoe!" This positive approach is important because so often children are given attention only when they are engaging in inappropriate behaviors, and they are ignored when they are performing those desirable behaviors which adults seem to expect to occur automatically.

Fifth, another element in the curriculum is the use of economic and systematic language. What is said to and by the child is reduced to simple understandable statements. The parent or teacher builds up the child's motor and vocal language repertoires gradually and systematically. What is said is consistent from day to day by all individuals working with the child.

Sixth, the Illinois Program is organized so that the child should make few if any mistakes while learning the concepts and skills. An errorless learning program enables the parent or teacher to take the child from one sub-skill to the next in a logical step-by-step sequence. The steps are small, so that the child has to learn only one new skill at a time as he performs increasingly more complex behaviors. If the child's instructional program is carefully planned, and if he is systematically reinforced as he progresses through the curriculum, the number of errors he makes will be minimized and his learning maximized.

Limitations

The Illinois Program was initially developed on the basis of experience with ten Down's Syndrome children whose ages ranged from four to seven and whose I.Q. scores ranged from approximately ten to forty-five. The Illinois Program is both new and experimental. Moreover, the Self-Help Instruction and the Motor Performance and Recreation Instruction sections have not been field tested or evaluated with populations other than the initial experimental group of children. The Systematic Language Instruction section has been field tested and was found to be effective with children enrolled in five

classes for "subtrainable" and "trainable" retarded children. Nevertheless, the language curriculum has been used with only a small number of retarded children within a rather narrow range of chronological age, mental age, and I.Q. scores.

In both the developmental and field testing phases of the project, the children were screened for sensory handicaps. At present, the effectiveness of the curriculum with children having vision and hearing impairments is unknown. Additional investigation is needed to determine the range of populations to which the Illinois Program, either in whole or in part, may in fact apply.

A further limitation of the curriculum stems from certain conditions under which the experimental teaching was conducted. The child-staff ratio in the developmental phase was exceptionally low (generally not exceeding 3:1 in instructional situations). During the field testing phase, the program appeared optimally effective only when a teacher's aide was present to attend to those children not receiving SLI instruction. How effective the Illinois Program would be and to what extent modifications would be necessary in settings in which the child-staff ratio is high or in which there is no teacher's aide has not been determined.

Future Plans

The data and observations during the field testing program indicate that the Systematic Language Instruction curriculum can be understood and mastered by teachers and that retarded children can learn specific skills and concepts under this system. It should be noted that neither Self-Help Instruction nor Motor Performance and Recreation Instruction has as yet been field tested.

The next logical step is to disseminate the entire curriculum, with provisions for training, supervision, and evaluation. In order to provide for a mechanism of distribution which would (a) meet the special education needs of retarded children, (b) provide for ongoing evaluation and revision of the curriculum, and (c) maximize continued feedback to project personnel, it is recommended that a third phase be devoted to <u>dissemination</u> <u>and</u> <u>demonstration</u> of the Illinois Program.

One basic long-range goal of this third phase would be the development of a number of <u>demonstration</u> <u>centers</u> throughout a state in which staff would be trained in the implementation of the Illinois Program. Through workshops, seminars, newsletters, visitation, supervision, and ongoing evaluation, curricular materials could periodically be distributed, revised, and up-dated as indicated. For example, the State of Illinois is divided geographically into six Zones, each with a Zone Center, in order that mental health services would be available in or near the community in which an individual lives. A network of demonstration centers in the State of Illinois might effectively be

established on a zone-by-zone basis, with a single demonstration center within each zone. The various zone centers would serve as either the physical locations of programs or as resource facilities for the mobilization and development of such programs.

The model demonstration centers would serve the following functions:

1. Every educational, institutional, and home setting in a state would be within approximately 125 miles of a demonstration center. This would provide maximal access for administrators, teachers, and parents to learn of important new developments in educational programs for retarded children. Geographic proximity and access to trained personnel would promote maximum community participation.

2. Such a statewide instructional network could provide an excellent mechanism for ongoing field testing, evaluation, and revision designed for further development of curricular material. A system for disseminating and sharing information so that the curriculum could effectively be adapted to a variety of educational and home settings would also be developed.

3. Through consultations, workshops, newsletters, and other means of communication, the demonstration centers should serve as catalysts for the development of various community educational programs for retarded children (e.g., day schools, state hospitals, etc.).

4. The research/training component would be an integral element in the demonstration and dissemination phase, so that the Illinois Program may increase in scope and effectiveness as revisions are made based on the reactions of teachers, parents, and children to their participation in the programs.

5. A model program for training teachers and parents to instruct retarded children will be developed for use in other states.

Much of the critical groundwork for the establishment of the initial two demonstration centers has been completed through the mutual cooperation of the Adler Zone Center, the University of Illinois, and local private and public schools. At present, administrative personnel from the Office of the Superintendent of Public Instruction in Illinois, the Department of Mental Health, and the University of Illinois are discussing the possibility of establishing these two demonstration centers for the 1970-1971 academic year. This effort would require the continued mobilization of the resources of Adler, the University, and local schools and agencies.

CHAPTER TWO

CONTENTS OF THE ILLINOIS PROGRAM

This handbook is intended to serve as a guide for the use of one or more of the major areas programmed in SYSTEMATIC INSTRUCTION FOR RETARDED CHILDREN: THE ILLINOIS PROGRAM. The three major areas are:

a. Systematic Language Instruction

b. Self-Help Instruction

c. Motor Performance and Recreation Instruction

The Teacher-Parent Guide and the three sections form the integrated curriculum; an individual section may be used in whole or in part, depending on the educational objectives of the user and the repertoire of the child. The specific procedures are intended to be used as written, but there is sufficient flexibility for the teacher or parent to make necessary deviations in order to adapt the curriculum to specific instructional requirements.

The contents of the curriculum are as follows:

PART I. TEACHER-PARENT GUIDE

PART II. SYSTEMATIC LANGUAGE INSTRUCTION

Acknowledgments

SECTION ONE: PROGRAMMING YOURSELF AS A SYSTEMATIC LANGUAGE INSTRUCTOR

Chapter 1. Introduction

Chapter II. Instructions for Use of the Lesson Plans

Chapter III. The Nature of the Learning Task

Chapter IV. Implementing the Program.

Shaping the Learner
Entering the Program
Selecting Reinforcers
Using Voice as an Instructional Tool
Modifying Procedures to Facilitate Learning
Going Beyond the Lesson Plan
Recording Responses
Sample Recording Sheet
Providing Systematic Review

Chapter V. Developing and Expanding the Child's Verbal Repertoire

SECTION TWO: PREREQUISITE BEHAVIORS FOR LANGUAGE INSTRUCTION

Introduction

Model Lesson Plans

Good Attending
Attending to Own Name
"Touch" and "Touch another"

SECTION THREE: LESSON PLANS FOR LANGUAGE INSTRUCTION

Master Lesson Plan: Object Discrimination: Ball

Model Lesson Plans

Yes-No Response: Indicative
Yes-No Response: Confirmative
Object Discrimination: Door
Object Discrimination: Body Parts - Nose
Question Forms: Who
Question Forms: What
Actions: Intransitive Verbs - Jump
Actions: Transitive Verbs - Open
Adjectives: Big
Adjectives: Wet
Adjectives: Loud and Quiet
Adjectives: Right (hand)
Adjectives: Same
Prepositions: (Put) in
Possessive Pronouns: Expressive Use - My
Possessive Pronouns: His
Objective Pronouns: Her
Subjective Pronouns: He
Subjective Pronouns: Expressive Use - I
Plurals
Adverbs: Up and Down
Adverbs: Fast
Multiple Commands: The Use of "And"
Establishment of a Chain of Actions Under a Single Vocal Command: Set the Table

SECTION FOUR: CONCEPTS AND MATERIALS

Using the Master Word List

Master Word List

Materials List

SECTION FIVE: REFERENCES

PART III. SELF-HELP INSTRUCTION

INTRODUCTION

DRESSING PROGRAM

Introduction

Model Lesson Plans for Instruction In Undressing and Dressing

Sock and Related Garments
Shoe and Related Garments
T-Shirt and Related Garments
Pants and Related Garments
Dress and Related Garments
Coat and Related Garments
Hat and Related Garments
Mitten and Related Garments
Zipping
Snapping
Buttoning
Tying

DINING PROGRAM

Introduction

Model Lesson Plans for Teaching "Good Eating" Behaviors

Model Lesson Plans for Teaching Use of Utensils: Spoon and Fork Feeding; Use of a Knife; Finger Feeding; Drinking From A Glass

Behavioral Management of Inappropriate Dining Behaviors

TOILET TRAINING PROGRAM

Introduction

Comments on Basic Questions Raised By Parents and Child Care Workers

Pretraining Observation and Record Keeping

Developing and Implementing A Toilet Training Schedule

Developing The Child's Self-Control

GROOMING PROGRAM

Introduction

Model Lesson Plans

Tooth Brushing and Related Skills
Hand Washing and Related Skills
Hair Brushing and Related Skills
Nose Blowing and Related Skills

PART IV. MOTOR PERFORMANCE AND RECREATION INSTRUCTION

INTRODUCTION

BASIC MOVEMENT

Introduction

Model Lesson Plans

Walking
Marching
Kicking
Throwing
Pulling and Pushing
Rolling
Jumping
Crawling
Hopping
Climbing
Swinging
Squatting
Catching
Kneeling
Hitting
Running
Hanging
Walking On A Balance Beam

RHYTHM

Introduction

Model Lesson Plans

Music I -- Stop and Go
Music II -- Loud and Soft
Music III -- Fast and Slow
Music IV -- Combining Dimensions of Loudness and Fastness

ARTS AND CRAFTS

Introduction

Model Lesson Plans

- Modeling With Clay
- Drawing
- Pasting With Glue
- Painting
- Cutting With Scissors

MISCELLANEOUS ACTIVITIES

Introduction

Model Lesson Plans

- Tearing Paper
- Bottle Top Capping
- Bead Threading
- Clothes Pin Hanging
- Putting Disks Into A Box
- Paper Lacing
- Buttoning
- Bending Over
- Go
- Stop
- Relays
- The Sit-Up

CHAPTER THREE

DECIDING WHAT TO TEACH

Choosing appropriate subject matter and a logical instructional sequence requires careful analysis on the part of the parent or teacher. In most cases, the retarded child has managed to acquire only a few of the basic language, self-help, and motor performance skills. It is thus often necessary to teach the child practically all of these basic concepts and skills. This chapter offers suggestions to aid parents, child care staff, and teachers in planning instructional programs for retarded children.

Observe the Child's Daily Activities

The first step in instructional planning is to become familiar with the child's behavior. It is generally necessary to conduct a deliberate objective study of the child's behavior under different conditions in order to achieve the specific knowledge necessary for instructional planning. The parent, teacher, or child care worker should, as much as possible, avoid disturbing the child's normal routine or behavior during these observations. It would, of course, be extremely difficult to observe all the child's behavior in a single day. One should therefore observe specific situations and activities over a period of time. This observation should continue until the child's proficiency on various tasks and the conditions which influence his behavior are demonstrated.

There are several general classes of child behavior which might be considered for observation:

Language Behaviors

a. Response to gestures

b. Response to single words

c. Response to phrases or sentences

d. Expression through gesture

e. Expression through single words

f. Expression through phrases or sentences

Self-Help Behaviors

a. Behavior related to dressing

b. Behavior related to dining

c. Behavior related to toileting

d. Behavior related to grooming

Motor Performance and Recreation Behaviors

a. Gross motor coordination tasks

b. Fine motor coordination tasks

c. Relationships with others during play

d. Proficiency in recreational activities

It is helpful to keep a written record of the child's behaviors, particularly if observations are made over a period of days or weeks. There are several questions which should be considered during the observation period:

1. What kind of behavior does the child exhibit?

2. How often does it occur?

3. How long is the behavior maintained?

4. What are the conditions before (antecedent), during, and after (consequence) the child's appropriate and inappropriate behaviors?

5. In what ways are the child's behaviors related to people, places, objects, time of day, or physical state of the child?

Written records can be kept by making simple record sheets which include the date, description of behavior, and antecedent and consequent events. Whitney (1966) describes a procedure for recording observations. It will probably not be necessary to keep detailed records on all behaviors. The parent or teacher might prefer to record only those behaviors he or she wishes to modify or teach. A sample observation sheet is presented below.

SAMPLE OBSERVATION SHEET

	ANTECEDENT	BEHAVIOR	CONSEQUENCE
6/3	Steve takes toy from brother Bob.	Bob hits Steve.	Steve cries.
6/6	Mother says to Steve, "Put on your shirt."	Steve puts on shirt.	Mother says, "Good, Steve! You put on your shirt."

When these behavioral records have been compiled, it may be helpful to review the data sheets and attempt to place the different samples of the child's behavior into categories which have common characteristics. For example, a child may have difficulty in tying his shoes, picking up small objects, and manipulating a spoon and fork. One might expect, therefore, that this child will have difficulty with other tasks involving eye-hand coordination. Attention can then be directed towards activities in which these types of coordination are involved. Increased attention to this general problem area may indicate additional previously unobserved situations in which the child is having difficulty.

Study the Curriculum

The next step in deciding what to teach is to study the curriculum carefully. The Illinois Program contains a multitude of concepts and skills which the teacher may consider for instructional purposes. Once the teacher has carefully observed a child's behavioral repertoire in relation to the concepts and skills programmed in the curriculum, she is then ready to select specific instructional objectives for that child.

Select Specific Instructional Objectives

There are at least eight basic criteria which may be helpful for a teacher's determining her instructional priorities:

1. Prior knowledge - The teacher should concentrate on those concepts and skills that the child does not already know. It is vital to pretest prior to teaching so that one can differentiate between what a child "should know" and what he actually does.

2. Prerequisite skills - No concepts should be taught without considering whether the child has mastered knowledge or skills that are prerequisites for his learning the new ones.

3. Relevance - Skills which are related to the child's physical well-being and safety should receive high priority.

4. Physical proximity - Priority also should be given to those activities representing people, objects, or situations which are physically present in the child's daily environment.

5. Frequency of encounter - It is necessary to determine when, where, and how frequently a child is expected to encounter and respond to particular situations. Those concepts and skills which the child is likely to use most frequently should have priority for instruction.

6. Concreteness - Concrete concepts which are based on actual experiences should be taught before more abstract ones.

7. Appeal - If the child actively engages in or enjoys learning those concepts and skills that are presented initially, he will likely remain enthusiastic.

8. Appropriateness - There may be inappropriate disruptive behaviors which create stresses and tensions in the learning situation. Such behaviors will interfere with learning unless they are dealt with immediately.

Application of these criteria may be helpful in selecting and assigning priorities to the specific skills and activities to be taught. Since each child's experiences and needs are somewhat different, however, it is necessary to plan individualized instructional objectives for each child. See Mager, 1962, for a detailed presentation of a systematic procedure for choosing instructional objectives.

It is essential to state the objective in terms of what the child must do. In many cases parents and teachers plan in terms of that which they intend to teach, rather than specify the terminal behavior which children must perform. There are several advantages in thinking of objectives as terminal behaviors.

First, the terminal behavior or objective is stated in observable behavioral terms, such as buttoning all the coat buttons properly. Second, terminal behaviors can be analyzed into their component parts. Buttoning, for example, might be analyzed as follows:

1. Child attempts to button coat.

2. Child locates the corresponding button and buttonhole.

3. Child grasps cloth around buttonhole with the left thumb and forefinger.

4. Child grasps one half of the button with thumb and forefinger of the right hand.

5. Child pushes the button toward the buttonhole.

6. Child inserts the button into the buttonhole.

7. Child releases cloth with left hand, grasps other half of button, and pulls the button through.

8. Child releases button with right thumb and forefinger and pulls the cloth over the button.

Children who cannot perform a terminal behavior must first attain mastery of necessary sub-skills. If a child has not developed finger-thumb opposition, he will have difficulty in grasping the buttons and cloth. In this case, the sub-skill chosen for our first instructional objective is to teach the child finger-thumb opposition. Unless the child develops this buttoning sub-skill, he will experience great difficulty in attempting to learn how to button.

In summary, task analysis, or breaking tasks down into their component parts, can be a very useful technique in selecting instructional objectives for teaching children a variety of skills. Perhaps the most helpful aspects of task analysis are: (a) making teachers and parents aware of how complex many tasks are, (b) analyzing the specific sub-skills involved in a given task, and (c) providing specific direction for instruction.

Decide When and Where to Teach

Once the parent, teacher, or child care worker has decided on her instructional priorities, the next step is to determine the appropriate schedule and setting for teaching. It is recommended that instruction for the retarded child take place throughout his day. There are many situational opportunities which may be used to advantage. Skills related to dining should be taught at meal times. Skills related to toileting, dressing, and play should be taught when the child is in the bathroom, bedroom, or play area, respectively. The principles and procedures for language training may be applied at any time; however, it is desirable to reserve a particular block of time for the systematic instruction of language.

CHAPTER FOUR

DESCRIPTION OF THE LESSON PLANS

The curriculum in each major area consists of an introductory section and a series of model lesson plans detailing the instructional procedures. The lesson plans are written in a "Do this" format. Each plan is programmed to indicate specifically what the teacher is to say and what she is to do in order to teach the given concept or skill. It is intended that the child learn with a minimum of errors and a maximum of payoff (reinforcement). When and how to give the child reinforcement, cues, prompts, assistance, and correction are also spelled out in detail.

Basic Teaching Procedures

Due to the respective instructional requirements, there are minor differences in teaching procedures among the three major areas. However, the various components of the overall teaching procedure in general and the lesson plans in particular are basically the same across all areas. Following is an analysis of this basic teaching procedure:

Task Analysis - Each skill or concept to be taught is broken down into its component sub-tasks. The child learns in a step-by-step manner, performing increasingly complex sub-tasks.

Errorless Learning - The goal of the curriculum is to minimize the child's errors and maximize his mastery of the lesson plan objectives. Through careful programming, appropriate demonstrations, contingent and consistent reinforcement of correct responses, physical prevention of imminent errors, and non-punishing corrections, the teacher directs the child towards an errorless learning experience.

Reinforcement Procedure - The emphasis is on the child's appropriate responses in learning situations. The parent or teacher expects the child to perform appropriately and communicates her approval by reinforcing him.

Children are reinforced for all correct responses to task requests during the instructional sequence. Such reinforcements may take the form of enthusiastic praise, hugs, pats, etc. Children are not reinforced during a pretest or a posttest but may be reinforced after completing the test.

Reinforcement is most effective when it follows immediately after the child's correct response. The type of reinforcement that is effective may vary from child to child and from one situation to another.

Many children require primary reinforcers (e.g., candy, cookies, etc.). Others will work for secondary reinforcers, e.g., tokens which can later be exchanged for food or an opportunity to play with a favorite toy. It is critical that the teacher determine carefully what is and what is not reinforcing to the particular child. She should also be alert to the fact that what is reinforcing for a given child may change over time.

Correction Procedures - The child will make some errors, engage in some inappropriate behaviors, and at times not respond at all to a task request. Correction procedures have been developed to minimize such errors in motor and vocal behavior. They are used immediately (a) when the child's actions indicate that he is on the verge of making an error, (b) after an error occurs -- to model the correct response and to decrease the probability of a second error, and (c) if the child makes no response to a task request.

The child is not reinforced during the correction procedures when he makes a correct motor response which is forced by the teacher. This is because it is not a self-initiated behavior. A neutral "OK" may be given when the child makes a correct vocal response during the correction procedure as this is a self-initiated behavior. However, since this response is only an imitation of the teacher's direct cue, enthusiastic reinforcement is withheld.

When the child responds correctly to a task request given without cues or teacher-assistance, the teacher should reinforce the child with enthusiastic smiles, hugs, and praise. Self-initiated correct responses from the child should ALWAYS be reinforced by the teacher.

Meeting Criterion as a Condition for Higher Level Instruction - The lesson plans are divided into stages of increasing complexity. The "distance between" these stages is programmed to assure that S proceeds through a lesson, and from one lesson to another, with a minimum of errors.

While the expectation is that children will make few errors, a definite criterion has been established at each stage within a lesson. Only when the child independently meets the criterion does he move on to the more complex next stage.

Lesson Plan Format

What the parent or teacher says and what she does in instructing the child is detailed within the lesson plan. The typical lesson plan consists of the following sections:

Objective(s)

Instructional objectives are written in behavioral terms. They specify what a child is to do. The objective has been accomplished when, and only when, the child meets the criteria for terminal behavior.

Prerequisite Behaviors or Skills

The lesson plans are ordered so that children are first taught a set of skills which are prerequisites to all other instruction. The prerequisite knowledge which is listed for each lesson plan is quite specific to that plan. The child must have already learned the designated prerequisites to insure that, if he fails a pretest, it is only because he does not know the new concept being tested. If the child fails the pretest on that new concept for any other reason, the results are uninterpretable.

There may be a long interval between the time when a child is posttested on a concept and the time that the concept is utilized as a prerequisite skill for another concept. When this is the case, the teacher should retest the child on the concepts or skills listed as prerequisites. If the child fails, these concepts should be reviewed, and the child should be posttested again. When he passes the posttests on all the concepts listed as prerequisite knowledge, instruction on the new concept may then begin.

Materials

A minimum of materials (common objects or pictures) is required. The necessary materials are listed at the beginning of each lesson plan. The materials used may change from stage to stage of a lesson plan. Materials requiring finer discriminations are substituted in as the lesson plan proceeds.

Teaching Procedure

The teaching procedure consists of the pretest, demonstration, task request, terminal behavior, and posttest sequence. The child's responses determine his progression through the instructional stages of a lesson plan. Each response by the child is a stimulus for the teacher to use the appropriate reinforcement or correction procedure.

A. Pretesting and Posttesting - Pretesting and posttesting are integral parts of the instructional procedure. Their purpose is to assess whether the child can perform the behavior specified in the instructional objective. This behavior is the terminal behavior which is systematically developed in a lesson plan.

Conditions for pretesting and posttesting are identical. The same materials are used in both. It is important that standard testing conditions be maintained. The teacher should present the task requests in a neutral tone, with no inflectional cues or accompanying facial cues. THE CHILD'S RESPONSES ARE NEITHER REINFORCED NOR CORRECTED.

Ideally, pretesting and posttesting should be done only in a one-to-one setting. This insures that the child is responding on his own to the task request and not imitating another child's response.

If the child passes the pretest, he has, in effect, passed the posttest. He is not a candidate for instruction on that specific concept; instead, he is pretested on another concept. If he fails the pretest, he should be taught the lesson. When and only when the child has failed the pretest, mastered the various stages of the lesson plan, and passed the posttest, has he, by definition, learned the concept or skill.

B. Demonstration - The demonstration stages are intended to serve as models for the child's behavior. One of their main functions is to further errorless learning. The teacher illustrates the responses which will be required of the child. Each demonstration stage is followed immediately by one or more task requests.

C. Task Request - After each demonstration, the teacher requests the child to perform the appropriate task. These task requests correspond directly to the sub-skills required for the terminal behavior. The child moves from one task request to another only as he independently meets the criterion specified at each given stage.

D. Terminal Behavior - The terminal behavior stage includes the final set of task requests in each lesson plan. The purpose of this stage is to insure that the child has mastered the entire sequence of actions necessary to meet the lesson plan objectives. Since this is a task request stage, assistance, cues, and reinforcement are given the child as indicated. When the child independently meets the criteria for terminal behavior, he is ready to be posttested.

Notes

Many lesson plans are followed by one or several notes. These notes to the teacher indicate deviations from the procedure or some aspect of the procedure which requires special consideration.

Generalizations and Discriminations

The activities in this section are designed to move the child to a higher level of competence than that provided for in the basic lesson plan. They represent more complex but necessary learning.

Related Concepts

Each model lesson plan can be used to teach a number of related concepts or skills. For example, the lesson plan "wet" also may be used to teach "dry," "rough," and "heavy." Related concepts are listed at the very end of the lesson plans.

CHAPTER FIVE

BEHAVIORAL ANALYSIS AND MANAGEMENT

Behavioral analysis is a technology for the management and instruction of children. This approach is based on experiments with children, adults, and animals carried out during the past several decades. The focus is on the child's ongoing behaviors, and the task of the parent, teacher, or child care worker is to set up the conditions preceding and following the child's various behaviors in order to assure that the child will spend most of his time engaging in behaviors defined as appropriate. Causal relationships between certain environmental events (cues and consequences) and specific behaviors are demonstrated, and a program is developed in order to reach a specific goal, or terminal behavior.

Clear definitions of desired behaviors and explicit provision for contingent reinforcement make it possible to evaluate the extent of the program's success at any time. This precision also makes it easier to identify the strengths and weaknesses of each lesson plan.

The following section consists of (a) a list of basic principles to consider in undertaking a behavioral analysis and (b) a set of procedures helpful in carrying out a child management and teaching program. It is often necessary, for the sake of precise communication, to use technical terms. Whenever this is done, such terms are translated into roughly equivalent everyday language, and appropriate examples are presented. A thorough mastery of the material in this section is essential for the appropriate use of the specific lesson plans and procedures in this curriculum.

Basic Principles

1. EFFECTIVE CHILD MANAGEMENT REQUIRES CLOSE ATTENTION TO THE CHILD'S BEHAVIORS. Rather than make untestable inferences concerning the child's thoughts, feelings, and intentions, carefully observe what he actually DOES. Pay special attention to the situations which precede his behaviors (cues) and to what happens after each behavior (consequences).

2. Behavior is a function of its past consequences.

A. A CHILD DOES WHAT PAYS OFF. If you positively reinforce, or reward, a given behavior, that behavior is strengthened and is more likely to occur in the future. For example, if you hug and praise a child while he is learning to ride a bike, it is more likely that he will continue to try to master the task. He may even become more enthusiastic about doing so, by pointing out his accomplishments to you: "Look, Ma, no hands!"

B. A CHILD DOES NOT ENGAGE IN (EMIT) BEHAVIOR THAT DOES NOT PAY OFF. If you do not reinforce a given behavior (response), that behavior is weakened and is less likely to occur in the future. If you give a child no attention or help as he is learning to ride his bike, it is likely that he will give up (be extinguished), since the task may be too complex and unrewarding.

3. THUS, BEHAVIORS WHICH ARE REINFORCED WILL BECOME MORE FREQUENT AND BEHAVIORS WHICH ARE NOT REINFORCED WILL DECREASE IN FREQUENCY. Examples of common reinforcers are attention, praise, highly preferred food, and favorite toys. Very loud noises, isolations, withdrawal of attention, and removel of highly preferred objects are not positively reinforcing for most children.

4. EFFECTIVE BEHAVIORAL MANAGEMENT REQUIRES THE SYSTEMATIC ARRANGEMENT OF THE ENVIRONMENT TO INSURE THAT THE CHILD'S APPROPRIATE BEHAVIORS ARE REINFORCED AND HIS INAPPROPRIATE BEHAVIORS ARE NOT REINFORCED.

5. Contingency, immediacy, consistency, and frequency of reinforcement affect the likelihood of occurrence of the child's various behaviors.

A. REINFORCEMENT MUST BE CONTINGENT. It must be given when, and only when, the child behaves appropriately. If you shower the child with praise and attention all the time, no matter what he does, you will strengthen both desirable and undesirable behaviors. It is therefore essential that you reinforce only desirable behaviors.

B. REINFORCEMENT MUST BE IMMEDIATE. The response that occurs just prior to the reinforcement is the one that is strengthened. If another response happens to occur between the desired response and the delivery of reinforcement, this second response will inadvertently be reinforced. Therefore, to be effective, reinforcement must immediately follow the desired response.

C. REINFORCEMENT MUST BE CONSISTENT. Once you have defined the response you want the child to perform, it is essential to specify in your own mind also what your response will be as a consequence for his emitting the desired behavior. It is then necessary that you respond in approximately the same reinforcing way each time the desired behavior occurs. For example, if a child is to learn to put his hands in his lap after each bite of food, a smile, a hug, and a comment like "Good hands, Sam" each time he behaves appropriately will quickly strengthen this behavior.

D. REINFORCEMENT MUST BE FREQUENT. The more often a given behavior consistently results in positive reinforcement, the stronger it will become.

6. THE PARTICULAR SCHEDULE OF REINFORCEMENT IS AN IMPORTANT FACTOR IN DEVELOPING AND MAINTAINING THE DESIRED BEHAVIORS.

A. The most efficient way to establish or develop a behavior is to reinforce that behavior EACH TIME it occurs. (This is known as a continuous reinforcement schedule.)

B. Once a response is established, it can be strengthened and maintained without continous reinforcement. When you reinforce a behavior on some but not all of its occurrences, you are using an intermittent reinforcement schedule. Perhaps every fourth response, on the average, might be reinforced, as when you praise a child after approximately every fourth number as he counts to twenty. Or, perhaps appropriate behavior might be reinforced after a certain period of time, as when you praise a child approximately every two minutes for quiet sitting. Note that the transition from using a continuous schedule to using an intermittent schedule should be gradual and systematic.

7. THE EFFECTIVENESS OF A GIVEN REINFORCER CHANGES OVER TIME, depending on whether a child has had too little (deprivation) or too much (satiation) of that reinforcer. A hungry child will perform a task when the reinforcer is a piece of toast. On the other hand, food is not reinforcing just after a child has had a big lunch.

8. SOME (GENERALIZED) REINFORCERS ARE EFFECTIVE REGARDLESS OF ANY SPECIFIC STATE OF DEPRIVATION OR SATIATION. Some examples of generalized reinforcers are money, tokens, praise, attention, and marks.

9. Much of a child's learning involves his noticing environmental cues and responding appropriately to them. A child learns, for instance, that he is more likely to be reinforced for asking his mother a question when she is smiling than when she is frowning. The smile is a cue, or discriminative stimulus, that signals that reinforcement will be given if the child emits a certain appropriate behavior. EFFECTIVE CHILD MANAGEMENT REQUIRES THAT THE PARENT, TEACHER, OR CHILD CARE WORKER (a) SET UP CLEAR, UNAMBIGUOUS SIGNALLING EVENTS FOR THE CHILD AND (b) CONSISTENTLY PROVIDE THE APPROPRIATE REINFORCING CONSEQUENCES FOR THE CHILD'S BEHAVIORS UNDER THESE CLEARLY DEFINED CONDITIONS.

Basic Procedures

1. DEFINE THE APPROPRIATE BEHAVIORS THAT YOU WANT TO ENCOURAGE. The more clearly you specify them, the more likely you will be to reinforce them when they do occur. These will generally be behaviors that are incompatible with any inappropriate behaviors which the child may emit.

2. REINFORCE THOSE BEHAVIORS WHICH YOU CONSIDER TO BE APPROPRIATE and which you want to increase in frequency. Use those reinforcers which you have discovered are effective for the particular child. No one reinforcer can be expected to work uniformly for all children. Often, what is reinforcing for a given child may vary from day to day. When reinforcing the child, be enthusiastic: smile, hug him, and praise him appropriately.

When developing a new response, reinforce the child each time he emits the desired behavior. When the behavior has been established and occurs frequently, gradually begin to reinforce it less frequently and with less enthusiasm, until only an occasional smile may be needed to maintain the behavior. Be sure, as you are gradually proceeding from a continuous to an intermittent reinforcement schedule, that the frequency of the child's appropriate behavior remains high. If this frequency decreases, this indicates that more reinforcement is temporarily required.

3. DEFINE THE INAPPROPRIATE BEHAVIORS THAT YOU WANT TO DISCOURAGE. The more clearly you can specify them, the less likely you will be to reinforce them inadvertently.

4. IGNORE THE CHILD'S BEHAVIORS WHICH YOU CONSIDER TO BE INAPPROPRIATE (unless they are destructive or disruptive to the ongoing behavior of another child -- see point #6). Since many inappropriate behaviors are established and maintained largely by the attention given to them, they can be weakened by your withdrawing attention from the child when they occur.

A. Whenever the inappropriate behavior occurs, walk away, or turn your back to the child, or lower your head and look at your lap. This will enable you to ignore the behavior completely. Give the child no attention until he stops the inappropriate behavior. For example, if you are working a puzzle with the child and he sticks his tongue out at you, look at your lap for about ten seconds. Say nothing and give no facial response.

B. When the inappropriate behavior stops and the child emits an appropriate response, be sure to reinforce him enthusiastically with a smile, a hug, and a statement like, "Oh, you're a good boy. You play with the puzzle."

C. Remember that, although the inappropriate behavior may seem to be self-reinforcing, it was originally developed and strengthened by the attention of some individual(s). Now, it is maintained to a large extent by your attention. When that attention stops, the strength of the behavior will weaken.

5. TO ELIMINATE AN INAPPROPRIATE BEHAVIOR, IGNORE IT WHENEVER IT OCCURS, AND CONSTANTLY REINFORCE ANY INCOMPATIBLE APPROPRIATE BEHAVIOR(S). A child cannot emit an inappropriate behavior at the same time that he is behaving appropriately. Therefore, be sure to reinforce the child for his appropriate behaviors, especially in situations where he is likely to emit the undesired behavior.

For example, if a child frequently cries when he does not get his way, the crying should not be reinforced. And if, on a particular occasion when he did not get his way, he complies without crying, be sure to reinforce him. IF THE CHILD IS BEING CONSTANTLY REINFORCED FOR GOOD BEHAVIORS, THEN THERE IS LITTLE TIME, OPPORTUNITY, OR PAYOFF FOR INAPPROPRIATE BEHAVIOR.

6. IF A CHILD'S BEHAVIOR IS DESTRUCTIVE OR DISRUPTIVE TO ANOTHER CHILD, A PUNISHING CONSEQUENCE MAY BE NECESSARY. Punishment consists of either the withdrawal of a positive reinforcer or the presentation of an undesirable (aversive) consequence. The technique involving withdrawal of a positive reinforcer is recommended for parents, teachers, and child care workers in most situations.

For example, when a child bangs his favorite truck on his mother's expensive living-room table, his mother should immediately take away his truck without comment. Or, if a child hits his sister while in an ice-cream parlor, his mother should immediately take away his ice-cream cone without comment. In both cases, as soon as the child begins to behave appropriately, the mother may return the reinforcing object, saying something like, "Now your're a good boy. I like that."

When a child is likely to hurt himself or another child, it is generally advisable to:

A. Remove him from the situation. On the first occurrence of the destructive behavior, take the child away from the other children. Do not wait for the destructive behavior to occur over and over again. Just before taking the child away, say "Don't _____." Be matter-of-fact but firm while leading him away. Say as little as possible and use as little physical contact as possible.

B. Take the child to a quiet and uneventful place. Tell him that he must stay there for a given period of time (e.g., from five to fifteen minutes), and say again, "Don't ____."

C. Leave the room.

D. When the specified period of time has elapsed, providing that the child is behaving appropriately, let him go back to his previous activity or begin a new desired activity. Be sure to reinforce him whenever he emits the desired behavior. In fact, watch specifically

for the appropriate behaviors to occur and then reinforce them with enthusiasm. Mention specifically that the child is "playing nicely," or some such comment.

7. USE SHAPING TO DEVELOP NEW SKILLS OR TO REFINE ESTABLISHED ONES. To develop a new skill, first define the end or terminal behavior to be mastered. Then, break the behavior down into simple but increasingly more difficult steps. Each succeeding partial success (successive approximation) towards the desired behavior is reinforced. For example, when a retarded child is learning to use a spoon, the teacher or child care worker might first reinforce him immediately whenever he looks at the spoon. Later, the child must grasp it and, still later, bring the spoon correctly to his mouth in order to be reinforced.

It is extremely important that reinforcement be delivered immediately after the successful approximation, so that the desired response, rather than any other response that happens to occur in the meantime, is the one that is reinforced. Remember also that, after the child has successfully mastered a particular level of the skill, this behavior -- and no less -- should be expected of him.

Ideally, the first response required should be so simple that it can be easily emitted and promptly reinforced. Instead of waiting for the initial response to occur, it is often more practical and efficient to model the desired behavior. Say "Do this," demonstrate the behavior, wait for the child to imitate the behavior, and then promptly reinforce it. (See also point #11.)

8. FADING IS A TECHNIQUE OF ASSISTING A CHILD THROUGH A TASK AND THEN SYSTEMATICALLY DECREASING THE DEGREE OF HELP. The aim is to teach the child to engage in the desired complex behavior on his own, with no assistance and with minimal cues.

In teaching spreading with a knife, for example, the child care worker would first give complete assistance. First, she might hold the child's wrist, controlling his hand movement. Later, she might lightly touch his elbow while he is performing the spreading task. Finally, the child will make the entire set of motor responses without any assistance. The teacher or child care worker has gradually and systematically "faded out" her assistance, to the point where the child performs the task independently.

9. When teaching a new behavior, GIVE THE SMALLEST POSSIBLE CUE NEEDED TO BRING ABOUT THE DESIRED RESPONSE. For example, if the child forgets to cover his mouth when coughing (a response you know he has learned to make), draw his attention to you by coughing and, at the same time, covering your mouth with your hand. This procedure is preferable to your telling him, "Cover your mouth when you cough,"

because it increases the likelihood that the child will emit a SELF-INITIATED CORRECT RESPONSE in the future, without requiring requests from the teacher.

It is important to reinforce self-initiated correct behavior rather than to spend a great amount of time "correcting" inappropriate behavior, and thus attending to it. Effective behavior management requires that the parent or child care worker watch specifically for appropriate behaviors and reinforce them when they occur. Less effective behavior management occurs when one notices primarily inappropriate behaviors and then inadvertently reinforces them with attention.

10. WHEN A SKILL IS TAUGHT THAT REQUIRES SEVERAL COMPONENT RESPONSES (A BEHAVIORAL CHAIN), IT IS NECESSARY TO REINFORCE THE CHILD AT EACH STEP ALONG THE WAY. Praise should be given to the child as he completes each step of the chain; when the pattern of responding becomes automatic, praise can be withheld until the entire chain has been completed. It is essential that the child go through each step of the chain with as little help as possible. This will increase the likelihood that the self-initiated chain of responses will occur in the future.

11. MODELING IS A USEFUL, EFFICIENT TECHNIQUE FOR TEACHING BEHAVIORS WITHOUT REQUIRING THE CHILD TO GO THROUGH AN INVOLVED, UNREWARDING TRIAL-AND-ERROR PROCESS. It is often reinforcing for the child to do what others do successfully. If a child has not performed a given behavior, one can often model it, by saying "Do this" and then performing the correct behavior. Enthusiastic reinforcement for the child's correct imitation should be given immediately. After several such occasions, the child should emit the correct behavior without a model.

In a group situation, it is often effective to use as a model another child who already has performed that behavior. The teacher or child care worker should enthusiastically reinforce the model for his appropriate behaviors and, at the same time, refrain from reinforcing the other child until he, too, performs the desired behavior. He will rapidly "get the message" that it pays for him to do what the model is being reinforced for doing.

12. WHEN CHILDREN ARE IN A GROUP SITUATION, BEHAVIORAL CONTROL CAN BEST BE ESTABLISHED AND MAINTAINED BY YOUR ENTERING INTO THE ACTIVITIES. Through such involvement, it is easy both to model appropriate behaviors and to reinforce them when they occur. Give attention only to those children who are behaving appropriately; ignore those children who are behaving inappropriately until they perform the desired behaviors. At that time, reinforce them enthusiastically and mention specifically that they are "playing nicely," or whatever it is that deserves praise. If a shy child initiates play with other children, be sure to go to him and say, with excitement, "Good you are playing with Sam."

13. ERRORLESS LEARNING SHOULD BE THE GOAL OF ALL THOSE WHO WORK WITH CHILDREN. Making mistakes is <u>not</u> a necessary ingredient in the learning process. To the extent that parents and teachers mutually (a) define the expected appropriate behaviors, (b) require a certain standard of performance, (c) reinforce these behaviors immediately, consistently, and frequently when they occur, and (d) program the skills in a logical step-by-step sequence to enable the child to perform on his own increasingly complex behaviors, errorless learning will take place. This process will be reinforcing for both teacher and child.

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